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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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John L Cordani
Carmody and Torrance
P O Box 1110
50 Leavenworth Street
Waterbury, CT 06721-1110

EXAMINER	
HAMILTON, CYNTHIA	

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1795	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/586,414	KANGA, RUSTOM S.
	Examiner	Art Unit
	Cynthia Hamilton	1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *9/20/7*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-10 and 12-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-10, 12-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-6, 11 and 26 have been cancelled. The only independent claims 6 and 16 have been amended with limitations not present in the originally examined claims, independent or dependent. New rejections are made below to address these added limitations.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 6-10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanga (6,413,699) in view of Fan (5,262,275) and Cushner et al (5,798,019) further in view of Gush et al (3,619,601), Weber (3,615,450) , Gelbart (6,180,325) and Ohba et al (6,664,999) further in view of Nellissen (5,686,230), Wier (6,766,740), Trump (3,217625), Karol (3,645,179) and Speicher (3,645,178).

Kanga teaches applicants' photosensitive printing element and method of making a hollow cylindrical printing sleeve with the exception of the formation of a hollow cylindrical support and the use of collimated light for actinic radiation and wherein the light rays emanation form the source of light strike the photosensitive printing element at a substantially perpendicular angle to the arcurate surface.

With respect to making the hollow cylindrical printing sleeve up to the point of using the collimated light in the instant methods, the following is made obvious in the prior art. Kanga discloses as prior art Fan. Fan teaches that a cylinder can be used in col. 11 as a support and Cushner et al teach the formation of Fan systems on cylindrical

seamless cylinders. Kanga teaches the need when backflashing the plates such as those of Fan that a substrate of 85-95% absorbing actinic radiation is needed in order to get an even floor formed for good printing. Fan teaches the advantage of avoiding the need for a negative being formed by using the ablatable coverlayers. Cushner et al teaches the formation of seamless printing cylinders to avoid the bumps formed when solid plates are adhered to cylinders to form an arcurate surface. The formation of the plates of KANGA into the seamless cylinder of CUSHNER et al using the ablatable materials of FAN (1) in order to avoid all the unnecessary steps involved in forming a negative for imaging the photopolymerizable layer and (2) to obtain a more perfect printed image without a bump would have been obvious to one of ordinary skill in the art.

In Fan, see particularly col. 2, 10, and 11. In Cushner et al, see particularly col. 16-17, 21-22. In Kanga, see particularly the abstract, The Field of the invention, the paragraph bridging col. 1-2, col. 2, lines 49 to col. 3, lines 46, col. 6, lines 27- col. 7, lines 30. In Kanga, see particularly Abstract, The Field of the Invention, the paragraph bridging column 1 and 2, column 2, line 49, to column 3, line 46, column 6, line 27 to column 7, line 30, column 6, lines 15 - 50, columns 2 - 3.

With respect to the use of collimated light to image any printing plates such as those of Kanga et al or those made obvious as set forth from Kanga et al as addressed above, the imaging of relief plates with collimated light sources is well known in the relief printing plate art in order to form a finer image. Weber teaches the use of such for this reason. In Weber, see particularly col. 11, line 23-26, col. 13, lines 35-41, col. 14, lines 7-62. Gush teaches the use of collimated light col. 5. Gelbart teaches using a

reflector to collimate the exposure light in col. 1, lines 41-53 and col. 2, lines 49-col. 3, lines 17 and Fig. 2, number 37. Ohba et al teach using collimator lens to image a printing plate on a cylinder in the abstract, and summary of the invention. Thus, in order to obtain finer images and to avoid light scatter, the use of a collimated light source to image the cylinders set forth in the above paragraph with regard to Kanga, Fan and Cushner et al would have been prima facie obvious.

With respect to the use of collimated light such that the beams hit photosensitive printing element at an angle that is substantially perpendicular to the surface of the surface to be imaged whether photosensitive printing element or other at the point of impact in order to form a finer image, such is known in the prior art as well. Nellissen teaches the use of collimated light being bent and bounced off a rounded mirror to achieve such an effect for an cylindrical surface as well as other non flat surfaces. In Nellissen, see particularly Figure 2, col. 1, lines 60-68, col. 2, lines 26-39, col. 3, lines 3-6, 17-35, col. 5, lines 30-50, col. 6, and lines 15-24. Wier teaches the use of a collimating filter between the ultraviolet light source, i.e. an example of actinic light source, and the panel to receive the light such that the light falls onto the plate in substantially parallel rays of light in order to form a sharp clear image. Wier does not disclose other than flat surfaces but does teach the known desire to have the light hit the surface as close to perpendicular as possible for sharp clear images. In Wier, see particularly Summary of the Invention and col. 4, lines 17-28. Trump teaches the use of a plurality of tubular ports, passages or openings through a layer between light and surface to be imaged in order to collimate the light forming parallel light to the film path

which is cylindrical in the Trump device. Trump is not imaging a printing plate but instead silver images but for the same reason of obtaining sharp images on an arcurate surface. Speicher and Karol teach the use of collimated or non-divergent light to image the surface of a photoresist cylinder at an angle perpendicular to the arcurate surface either within the cylinder or outside the cylinder by using a mirror to bounce the light into the proper angle. See in both Speicher and Karol, Figures 2 and 3, and in Speicher, see particularly col. 2, lines 20-48. In Karol, the imaging can occur from the outside of the cylinder by using an outside conical mirror whose axis also lies on the axis of the cylinder as found in lines 35-49 of col. 2.

Thus, with respect to instant claims 6-10 and 13-14, the collimation of light as well as the use of such in a manner as to strike the surface to be imaged of an arcurate surface in order to form a finer image is known in the art as discussed above; therefore, the use of such exposure for the same art recognized purpose of sharpened images when exposing the cylinders made obvious from the plates of Kanga into the seamless cylinder of CUSHNER et al using the ablatable materials of FAN (1) in order to avoid all the unnecessary steps involved in forming a negative for imaging the photopolymerizable layer and (2) to obtain a more perfect printed image without a bump would have been obvious to one of ordinary skill in the art as combining prior art elements according to known methods to yield predictable results.

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanga (6,413,699) in view of Fan (5,262,275) and Cushner et al (5,798,019) further in view of Gush et al (3,619,601), Weber (3,615,450) , Gelbart (6,180,325) and Ohba et al (6,664,999) further in

view of Nellissen (5,686,230), Wier (6,766,740), Trump (3,217625), Karol (3,645,179) and Speicher (3,645,178) as applied to claim 6 above, and further in view of Kitamura et al (4,868,090) in view of Plambeck, Jr. (2,791,504) and Ferree et al (1,986,052). There is no disclosure in Kanga, Fan or Cushner et al to exposing the entire surface of the photosensitive printing element to actinic radiation at one time. However, such is known in the art as taught by Kitamura et al in col. 11 lines 3-42. With respect to instant clam 12 the use of such a quick exposure instead of a scanning exposure would have been prima facie obvious to save time in imaging the surface of the cylinder and collimating the light used for exposure in a method such as that set forth by Wier, Trump or Nellissen would have been prima facie obvious to obtain sharper images and as combining prior art elements according to known methods to yield predictable results.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanga (6,413,699) in view of Fan (5,262,275) and Cushner et al (5,798,019) further in view of Gush et al (3,619,601), Weber (3,615,450) , Gelbart (6,180,325) and Ohba et al (6,664,999) further in view of Nellissen (5,686,230), Wier (6,766,740), Trump (3,217625), Karol (3,645,179) and Speicher (3,645,178) further in view of Kitamura et al (4,868,090) as applied to claim 12 above, and further in view of in view of Plambeck, Jr. (2,791,504) and Ferree et al (1,986,052). The combination of Kanga, Fan and Cushner et al in view of Kitamura et al do not teach the use of the collimators having first and second opposing major faces and comprising at least one cell that extends from the first major face to the second major face, wherein at least one surface substantially absorbs actinic radiation incident upon the surface and actinic radiation passes through the collimator before reaching the photopolymerizable printing sleeve. However,

Plambeck Jr. taught that if lines formed were broadened excessively because of their fineness then the use of a light controlling baffle, e.g. an egg-crate baffle, could be used to eliminate those rays below the minimum desired angle. In Plambeck, jr., see particularly col. 4, lines 57-69. An egg crate baffle is a described by Ferree et al in Fig 6, a device for eliminating the glare and having intersecting baffle plates parallel to the focal axis and preferably of considerable width. The baffle plats preferably have dull finished surfaces, i.e. non light reflecting surfaces. Thus, with respect to the desire to obtain a finer image in the formation of relief plates then the use of a devise such as the egg crate baffle taught by Plambeck to control the angle of light, i.e. collimate the light, in imaging the cylinders of Fan and Kushner would have been prima facie obvious as combining prior art elements according to known methods to yield predictable results.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanga (6,413,699) in view of Fan (5,262,275) and Cushner et al (5,798,019) further in view of Gush et al (3,619,601), Weber (3,615,450) , Gelbart (6,180,325) and Ohba et al (6,664,999) further in view of Nellissen (5,686,230), Wier (6,766,740), Trump (3,217625), Karol (3,645,179) and Speicher (3,645,178) as applied to claim 14 above, and further in view of Plambeck, Jr. (2,791,504) and Ferree et al (1,986,052). As to the methods and plates set forth by the combination of Fan, Kanga and Cushner et al above, the use of a collimated light source is not taught. However, Plambeck Jr. taught that if lines formed were broadened excessively because of their fineness then the use of a light controlling baffle, e.g. an egg-crate baffle, could be used to eliminate those rays below the minimum desired angle. In Plambeck, jr., see particularly col. 4, lines 57-69. An egg crate baffle is a described by Ferree et al in Fig 6, a device for eliminating the glare and having intersecting baffle plates parallel to the focal axis and preferably of

considerable width. The baffle plates preferably have dull finished surfaces, i.e. non light reflecting surfaces. Thus, with respect to the desire to obtain a finer image in the formation of relief plates then the use of a devise such as the egg crate baffle taught by Plambeck to control the angle of light, i.e. collimate the light, in imaging the cylinders of Fan and Kushner would have been prima facie obvious as combining prior art elements according to known methods to yield predictable results.

7. Claims 16-17 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fan (5,262,275) in view of Cushner et al(5,798,019). further in vies of Plambeck, Jr. (2,791,504) and Ferree et al (1,986,052) and in view of Nellissen (5,686,230), Wier (6,766,740), Trump (3,217625), Karol (3,645,179) and Speicher (3,645,178). Fan teaches that a cylinder can be used in col. 11 as a support and Cushner et al teach the formation of Fan systems on cylindrical seamless cylinders. Cushner et al teaches the formation of seamless printing cylinders to avoid the bumps formed when solid plates are adhered to cylinders to form an arcurate surface. What is not taught within Fan and Cushner is the use of a collimated light source for exposing the photopolymerizable layer. However, Plambeck Jr. taught that if lines formed were broadened excessively because of their fineness then the use of a light controlling baffle, e.g. an egg-crate baffle, could be used to eliminate those rays below the minimum desired angle. In Plambeck, jr., see particularly col. 4, lines 57-69. An egg crate baffle is a described by Ferree et al in Fig 6, a device for eliminating the glare and having intersecting baffle plates parallel to the focal axis and preferably of considerable width. The baffle plats preferably have dull finished surfaces, i.e. non light reflecting surfaces. Thus, with respect to the desire to obtain a finer image in the formation of relief plates then the use of a devise such as the egg crate baffle taught by Plambeck to control

the angle of light, i.e. collimate the light, in imaging the cylinders of Fan and Kushner would have been prima facie obvious as combining prior art elements according to known methods to yield predictable results as combining prior art elements according to known methods to yield predictable results. With respect to the use of collimated light to image any printing plates such as those of Fan whether cylindrical or not in form, Weber teaches the use of such for this reason. In Weber, see particularly col. 11, line 23-26, col. 13, lines 35-41, col. 14, lines 7-62. Gush teaches the use of collimated light col. 5. Gelbart teaches using a reflector to collimate the exposure light in col. 1, lines 41-53 and col. 2, lines 49-col. 3, lines 17 and Fig. 2, number 37. Ohba et al teach using collimator lens to image a printing plate on a cylinder in the abstract, and summary of the invention. Thus, in order to obtain finer images and to avoid light scatter, the use of a collimated light source to image the cylinders set forth in the above paragraph with regard to Kanga, Fan and Cushner et al would have been prima facie obvious.

With respect to the use of collimated light such that the beams hit photosensitive printing element at an angle that is substantially perpendicular to the surface of the surface to be imaged whether photosensitive printing element or other at the point of impact in order to form a finer image, such is known in the prior art as well. Nellissen teaches the use of collimated light being bent and bounced off a rounded mirror to achieve such an effect for an cylindrical surface as well as other non flat surfaces. In Nellissen, see particularly Figure 2, col. 1, lines 60-68, col. 2, lines 26-39, col. 3, lines 3-6, 17-35, col. 5, lines 30-50, col. 6, and lines 15-24. Wier teaches the use of a collimating filter between the ultraviolet light source, i.e. an example of actinic light source, and the panel to receive the light such that the light falls onto the plate in substantially parallel rays of light in order to form a sharp clear image. Wier does not disclose other than flat surfaces

but does teach the known desire to have the light hit the surface as close to perpendicular as possible for sharp clear images. In Wier, see particularly Summary of the Invention and col. 4, lines 17-28. Trump teaches the use of a plurality of tubular ports, passages or openings through a layer between light and surface to be imaged in order to collimate the light forming parallel light to the film path which is cylindrical in the Trump device. Trump is not imaging a printing plate but instead silver images but for the same reason of obtaining sharp images on an arcurate surface. Speicher and Karol teach the use of collimated or non-divergent light to image the surface of a photoresist cylinder at an angle perpendicular to the arcurate surface either within the cylinder or outside the cylinder by using a mirror to bounce the light into the proper angle. See in both Speicher and Karol, Figures 2 and 3, and in Speicher, see particularly col. 2, lines 20-48. In Karol, the imaging can occur from the outside of the cylinder by using an outside conical mirror whose axis also lies on the axis of the cylinder as found in lines 35-49 of col. 2.

Thus, with respect to instant claims 16-17 and 21-25, the collimation of light as well as the use of such in a manner as to strike the surface to be imaged of an arcurate surface in order to form a finer image is known in the art as discussed above; therefore, the use of such exposure for the same art recognized purpose of sharpened images when exposing the cylinders made obvious from the plates of FAN (1) as modified with the teachings of Cushner et al in order to avoid all the unnecessary steps involved in forming a negative for imaging the photopolymerizable layer and (2) to obtain a more perfect printed image without a bump would have been obvious to one of ordinary skill in the art as combining prior art elements according to known methods to yield predictable results.

8. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fan (5,262,275) in view of Cushner et al(5,798,019). further in view of Plambeck, Jr. (2,791,504) and Ferree et al (1,986,052) and in view of Nellissen (5,686,230), Wier (6,766,740), Trump (3,217625), Karol (3,645,179) and Speicher (3,645,178) as applied to claim 16 above, and further in view of Kanga (6,413,699). The methods made obvious by Fan and Cushner et al in view of further in view of Plambeck, Jr. and Ferree et al and in view of Nellissen (5,686,230), Wier , Trump , Karol and Speicher set forth above do not disclose the use of a substrate with 85-95 percent blocked light for back exposure for forming a floor. However, Kanga teaches such a support with materials like that of Fan in order to obtain a more even floor and thus better printed images. In Kanga et al, see particularly the Abstract, col. 2 and 3, and col. 6. lines 15-50. Thus, with respect to instant claims 17-20, the use of such supports as those of Kanga with the methods of Fan using collimated light with an egg crate baffle as needed as taught by Plambeck for fine imaging or the methods of Neillissen, Wier, Trump, Karol or Speicher would have been prima facie obvious to obtain better printed images because of a more even floor being formed by backflash exposure. With respect to applicants' claims 17-20, the use of the supports of KANGA as the support of FAN while using collimated light with an egg crate baffle as needed for fine line imaging would have been obvious to workers of ordinary skill in the printing plate formation industry to obtain finer printed images by the formation of a more even floor being formed upon backflash exposure due to the blocked light substrate of KANGA being present.

9. Applicant's arguments filed September 20, 2007 have been fully considered but they are not persuasive. Applicants argue that Werber and Gush are improperly used because they are directed to planar printing elements and ant not arcurate ones thus do not solve the problem of

"collimating the source of actinic radiation strikes the printing element at an angle that is substantially perpendicular to the surface so that image quality can be improved. The examiner has shown where such a problem is known in the art as well as related imaging arts and several solutions are known for doing what applicants claim is unobvious in the art. Ohba et al is used in combination with Weber and Gush to show what is obvious in the prior art. This argument does not remove the rejection as now written. With respect to arguing the references individually, the whole of the rejections teach the obviousness of applicant's methods and the prior art has long recognized that sharper images can be obtained by using collimated light and light which strikes the portion to be imaged perpendicular to the surface whether planer, cylindrical, spherical or other form of irregular shape. The use of baffled light to obtain this is known as is the use of a cylindrical baffle as shown in Trump. The solutions are known in the art to obtain the desired results of sharper images and one is the use of such collimated light and various manners of collimation to obtain them. The rejection stands as modified.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Hamilton whose telephone number is 571-272-1331. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571) 272-0729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

December 3, 2007

Cynthia Hamilton
Primary Examiner
Art Unit 1795